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Cross-cultural Colour Comparisons: Global Marketers Beware!

Cross-cultural
Colour
Comparisons

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Do colours have different meanings in different cultures? Is one colour considered friendly and warm in one society and yet hostile and cold in another? If a marketer tries to convey the message of "inexpensive", should he/she use grey or purple? The answers to these and many similar questions may be significant to the international marketer.

Until recently most writers seemed to accept colour perceptions as being universal. For example, Danger (1968) provides a universal listing of colour associations. Some of the more common associations include:

Red: warmth, passion, excitement, fire, winter

Blue: coolness, water, sea, summer, men

Green: country, coolness, restfulness, spring

Yellow: sunshine, heat, cheerfulness

Grey: dignity, quietness

White: cleanliness

Pink: gentleness, women.

However, authors who have been concerned with cross-cultural differences have noted that colour perception may vary from culture to culture. Hall (1959) notes:

Americans treat colors informally as a whole — that is, situationally. We may use a spot of yellow or of red, or yellow and red to accent a gray wall. We would be unlikely to put the yellow and the red next to each other. The colors in themselves have little or no value. If they do, the criterion is taste (p. 133).

And on the issue of choice of colour for products and packaging, Ricks (1983) adds:

The choice of package and product coloring is very tricky. Sometimes companies have failed to sell their products overseas and have never known why. Often the reason was a simple one; the product or its container was merely an inappropriate color (pp. 32-3).

These days we live in a world of global products (Levitt 1983, 1988). There are many efficiencies which can be realised through the standardisation of some

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or all aspects of a product. While there are some minor modifications, a piece of Kentucky Fried Chicken tastes pretty much the same whether it is purchased in New York City, Cape Town, Beijing, or Paris; a package of Fuji Film looks familiar in all major markets of the world; a glass of Tang is a glass of Tang the world over.

In the drive for globalisation, however, some of the subtleties of cultural difference may be lost in the quest for cost-efficiency. Could it be that people in China prefer their cigarette packaging to be brown, while smokers in Japan like grey better? The implications for globalisation are immense.

More than 20 years ago Max Lüscher (1971) conducted the research for his now famous *Colour Test*. The qualities associated with the eight colours are based upon more than 35,000 tests. While the details of Lüscher's methodology were not provided in his book, it is likely, given Lüscher's orientation, that these tests were conducted on a sample of respondents with a strong Germanic background. The book presents many interesting insights about the meanings of the eight colours.

Sample

To test Lüscher's colours in a cross-cultural setting, data were gathered from four countries: China, South Korea, Japan, and the United States. All the respondents were college students attending major universities in major cities (Beijing, Seoul, Tokyo, and a medium-size western US city). The sample sizes were: China (86); South Korea (225); Japan (159); and US (114).

Most of the respondents were between 20 and 25 years of age (see Table I). There were more men in the samples from China and South Korea and more women in the Japanese sample. The United States group was more evenly divided with a slight tilt towards women (see Table I).

Country	Age category			Total
	Under 20	20-25	Over 25	
	%	%	%	
PRC	12 (14)	71 (83)	3 (3)	86
South Korea	23 (10)	153 (68)	49 (22)	225
Japan	26 (16)	105 (66)	28 (18)	159
United States	7 (6)	78 (69)	29 (25)	114
	Gender			
	Male	Female		
	%	%		
PRC	67 (78)	19 (22)		86
South Korea	184 (82)	41 (18)		225
Japan	28 (18)	131 (82)		159
United States	51 (45)	63 (55)		114
Total	330 (57)	254 (43)		584

Table I.
Summary of Age and
Gender Differences
among the Four
Countries

Methodology

Since colour consistency was very important to the results, several attempts were made to reproduce the eight Lüscher colours. Even with the wonders of laser reproduction, the colours seemed to vary both from the original and from copy to copy. To avoid this problem, a search was conducted in fabric stores. Eight fabrics, matched to the standard colours, were located. Swatches of these materials, cut to the size of the Lüscher colour cards, were pasted on plain white paper and numbered 1 to 8. Although there were minor variations in cloth thickness and weave, all respondents saw the same colours in the same order. Since these differences were consistent — that is the same materials were shown to all respondents — it was expected that the results would be comparable. The word “colour” was emphasised to minimise the effects which the different weave or fabric might have upon the results.

For those not familiar with the Lüscher Colour Test, it should be noted that the colours may not be as visualised in a generic sense. That is, the red is more of an orange-red. The blue is a navy-blue. The purple is a violet-purple. The green is a kelly-green. The brown is a reddish-brown. The yellow is a sunshine-yellow. The grey is a medium-grey. The black is a true black. Since the results of this test are colour-specific, care should be exercised not to generalise the findings.

The survey instrument was printed in English. Since the students in the foreign universities were all studying English, language was not felt to be a significant factor, which might bias the results. A researcher was present to help the respondents with any language or conceptual difficulties; however, no problems were encountered.

Few of the methodological details of Lüscher’s test are available. However, it is known that respondents were asked to identify their first and second favourite colour. Our questionnaire included this information but went beyond this primary test.

The questionnaire was divided into two sections. The first section asked the students to state which one of the eight colours they most closely associated with a series of 13 emotional words, such as happy or expensive. The second section of the questionnaire asked which colours the respondents identify with countries (such as Italy or France), which colours they connect with certain institutions (such as restaurants and theatres), and which colours they associate with various product packages (such as a laundry detergent box or a soft drink can). The order of the identifications was randomised to avoid any obvious patterns.

Results

Colour Perception of Words

Are the colours used in this test identified with any particular perceptions? Do these perceptions differ from culture to culture? Table II lists colours which respondents associated with 13 words used often to describe consumer products.

This list included words which reflect emotions (love, happy), general qualities (powerful, adventurous, progressive, trustworthy, sincere), as well as qualities

Table II.
Perception of Meaning
of Colours by Country

Country	Grey	Blue	Green	Red	Yellow	Purple	Brown	Black
China	Inexpensive*	High quality	Pure Trustworthy Dependable Sincere	Happy** Love* Adventurous*	Happy Pure** Progressive*	Expensive Love	Good-tasting*	Powerful** Expensive High quality Dependable Trustworthy
Korea		Powerful High quality Adventurous Sincere Trustworthy	Pure* Adventurous Sincere Trustworthy	Love** Good-tasting Adventurous	Happy** Pure Good-tasting Dependable	Expensive Love Dependable	Inexpensive	Powerful* Expensive
Japan	Inexpensive	Sincere** Trustworthy** High quality* Dependable	Pure Good-tasting Adventurous	Love** Good-tasting Happy Adventurous	Happy** Pure* Good-tasting	Expensive* Adventurous	Inexpensive	Powerful* Expensive Dependable
US	Expensive High quality Dependable	Dependable** High quality* Sincere Trustworthy* Expensive Powerful	Good-tasting Adventurous	Love* Adventurous Happy Good-tasting Inexpensive	Happy Pure Good-tasting	Progressive* Inexpensive Love	Inexpensive	Powerful** Expensive
** 50 per cent or more of respondents made this association. * 30-49 per cent of respondents made this association. All others, 20-29 per cent of respondents made this association.								

important to marketers (expensive, inexpensive, good tasting, high quality, dependable, pure).

Respondents were asked which colour they associated most closely with each of these words. Only words which had a 20 per cent or greater association response in a country are shown in Table II. Those words marked with an asterisk (*) had an association response between 30 per cent and 49 per cent; and words marked with a double asterisk (**) received more than 50 per cent of the respondents' votes regarding association.

The results show that in China and Japan grey is associated with inexpensive. On the other hand, in the United States this colour is associated with expensive as well as high quality and dependable. Blue connotes high quality in all the tested societies, and also means sincere, trustworthy, and dependable in Japan and the United States, and sincere and trustworthy in South Korea. In China these same three characteristics are associated with green. Green is moderately identified with being pure in all societies tested other than the United States. Additionally, green connotes good-tasting and adventurous in Japan and the United States.

All cultures identify red with both love and adventure, and all but the Chinese identify red with good-tasting. Yellow is the colour most often associated with happy in the oriental societies. Yellow is also seen as being pure and good-tasting, except in China where, rather than good-tasting, yellow is associated with being progressive.

Purple is perceived as expensive in the Asian cultures, but inexpensive in the United States. Purple is also a colour of love in China, South Korea, and the United States. The colour brown is perceived as good-tasting in China, and as inexpensive in South Korea, Japan, and the United States. Finally, black is seen as powerful and expensive in all four cultures and as dependable in both China and Japan. The Chinese also associate black with being trustworthy and high quality.

Colour Perceptions of Countries

Respondents were asked to relate the eight test colours to the following countries: China, South Korea, Japan, the United States, France, and Italy. The results are shown in Table III.

Not surprisingly, red is most commonly identified with China, with the Chinese having the strongest association. All four societies tested also identified red with Japan, but the strongest association was by the United States. Finally, all three Asian nations associated red with the United States, but the US did not make this association. Purple was most commonly connected with France, and all cultures related green to both France and Italy.

International marketers, who promote the country-of-origin of their product, may benefit by using the association of particular colours for specific countries. For example, French perfume may be sold in a purple package to a target market that identifies purple with France. Presumably, purple packaging would provide an additional cue for the imported product to consumers. Conversely, an international marketer may wish to downplay the imported status of its product and opt to use package colours already being used in the local market.

Table III.
Colour Perceptions
of Countries

Country	Chinese	Korean	Japanese	American
China	Red**	Red Brown	Brown* Red	Red*
Korea	Brown Grey Green Blue	Green* Blue	Brown Red Grey	Red*
Japan	Red Yellow	Red*	Red Green Blue	Red**
US	Red Green Yellow Blue	Red Yellow Blue	Red** Yellow	Blue** Green
France	Green Purple Yellow	Purple* Green	Purple* Green Yellow	Green Purple
Italy	Green Purple Brown	Purple Green	Red* Green Yellow	Green**

** 50 per cent or more of respondents made this association.
 * 30-49 per cent of the respondents made this association.
 All others, 20-29 per cent of respondents made this association.

Table IV.
Colour Perceptions
of Institutions

Institution	Chinese	Korean	Japanese	American
Government building	Grey*	Grey* Blue	Grey**	Grey**
Factory	Blue Grey	Grey* Black	Grey**	Grey** Black
Museum	Brown Grey	Grey Brown	Grey* Blue	Grey* Brown
Hospital	Grey Green Yellow	Green* Grey	Grey**	Yellow Grey*
School	Green**	Green* Blue Grey	Green Blue Grey	Green Grey Yellow
Restaurant	Brown* Yellow Purple	Brown	Brown*	Brown*
Theatre	Brown Purple			Brown Blue

** 50 per cent or more of respondents made this association.
 * 30-49 per cent of the respondents made this association.
 All others, 20-29 per cent of respondents made this association.

Colour Perceptions of Institutions

Table IV indicates colours associated with different types of institutions. It is interesting to see the cross-cultural similarities in perceptions. Brown is the colour most often associated with a restaurant by all societies tested. Hospitals, government buildings, factories, and museums were all associated with grey by each of the respondent groups. Schools are most often connected with green in the four nations, and had particularly strong associations with this colour in China and South Korea.

While Chinese and US respondents most often related the colour brown to theatres, neither South Korean nor Japanese respondents gave a 20 per cent or greater vote to any of the eight colours.

From a managerial perspective, service retailers may select colour schemes for their outlets which promote the traditional colour image associated with the type of service. For example, brown or wood tones for restaurants were selected by respondents in all four countries in this study.

Colour Perceptions of Product Packaging

Table V shows the colours which respondents identified with various products. Again there is a high degree of cross-cultural agreement. Over 50 per cent of the respondents in all countries tested associated green with the label on a can of vegetables. Soap-wrappers are identified with yellow by 30-49 per cent of the respondents in the tested cultures. Yellow is also the colour most often associated with a box of candy and it is also identified by 30 to 49 per cent

Product Packaging	Chinese	Korean	Japanese	American
The label on a can of vegetables	Green**	Green**	Green**	Green**
The wrapper of a bar of hand soap	Yellow*	Yellow*	Yellow*	Yellow Green
A box of laundry detergent	Yellow*	Blue	Yellow* Green	Yellow Red*
A box of candy	Yellow Red Purple	Yellow* Red	Yellow* Red*	Yellow* Brown*
A soft drink label	Brown	Yellow* Purple	Yellow*	Red**
A packet of cigarettes	Brown*	Grey	Grey**	Black* Brown
A box of headache remedy	Grey		Grey* Blue	Red
** 50 per cent or more of respondents made this association.				
* 30-49 per cent of respondents made this association.				
All others, 20-29 per cent of respondents made this association.				

Table V.
Colour Perceptions
of Products

of the respondents in the US, Japan, and China as the colour related to a box of laundry detergent. While not so strongly identified, the South Koreans most often perceive the box of laundry detergent as blue.

Soft drink labels, cigarette packets, and boxes of headache remedy do not have such apparent cross-cultural identifications. Soft drink labels are strongly viewed as red in the US, less strongly viewed as yellow in Japan and South Korea, and only moderately identified with brown in China. Most United States respondents perceived a cigarette pack to be black, while Chinese viewed it as brown, and South Koreans and Japanese viewed it as grey. Finally, while a box of headache remedy is perceived as grey by Japanese and Chinese respondents, and as red by US respondents, South Koreans held no strong feelings about the colour perception of this product and no colour received even a 20 per cent response.

Marketing Implications

In their quest for global efficiencies, many marketers seem to make the implicit assumption that packaging and product colour do not seem to make much of a difference on sales results. So long as the colour attracts attention and provides good visibility, the actual colour does not matter. Often this decision will be delegated to a design artist who may not be thinking about cross-cultural perceptual differences.

Likewise, many international marketers may make the assumption that, so long as the product is good, the colours on the package are relatively unimportant. In some cases they may be correct in this assumption. Companies with a monopoly or a superior product may not need to be concerned with colour. When a product is introduced into a new market, for example, it may enjoy this monopoly status. So long as the demand for a product greatly exceeds the supply or the product has little direct competition, colour may not be significant.

However, companies which introduce products into highly competitive foreign markets may not have this advantage. Trying to persuade customers to switch to a product with an unappealing or negative connotation colour may place a major obstacle before the marketer. It is suggested that the international marketer conduct product-specific, cross-cultural research to discover which colours are associated with the product or service and the connotations which alternative colour options may hold.

Within the context and limitations of the present study, it can be seen there are also some strong cultural variations in the perceptions of colour. Marketers must consider the combination of colour associations with regard to the specific product (see Table V) and the connotations of colour (see Table II). For example, if a global marketer wishes to sell cans of vegetables, green might be a good colour for the label in these four nations. Green is also associated by these cultures as being pure, trustworthy, good-tasting, and even adventurous. Marketers wishing to convey these qualities may consider using green on their packages or labels.

Global marketers of hand soap, laundry detergent, and candy might consider yellow as their dominant package colour, since it is viewed as both happy and

pure in all four of these cultures. Yellow is also perceived as being good-tasting in South Korea, Japan, and the United States.

On the other hand, manufacturers of soft drinks, cigarettes, and headache remedies should be warned that standardised marketing may be risky with respect to colour perceptions. As an example, the Chinese associate the colour brown with a soft drink label, and perceive brown as good-tasting; South Koreans and Japanese associate the colour yellow with a soft drink label, and likewise perceive it as good-tasting; and, finally, the US respondents associate the colour red with a soft drink label and with being good-tasting.

Future Research

Like many pilot studies of this type, the results raise a number of questions. Some of the areas which need exploration in greater depth are:

- (1) Are colour perceptions and associations stable over time? Do these colours reflect a national personality and, if so, does this identity change with changes in national philosophy? About ten years ago red was greatly preferred by the Japanese for automobiles. Today white is the colour of preference. Many of the older red automobiles are being painted white, so they will sell in the Japanese used-car market. A longitudinal study is needed to determine just how colour preferences change over time.
- (2) Is colour identification influenced by the colouring of existing products? Is red identified with a soft drink label because a Coca-Cola label is red? Are there external variables which may influence these associations? Are the perceptions of countries influenced by factors such as the colour of a flag or a colour which may be associated with a political philosophy? For example, red is strongly identified with China.

The Chinese currently associate black with power. One hundred years ago, during the Qing Dynasty, it may have been red which was associated with power. In those days red was the colour of officials of the country. Today most Government officials dress in black and drive black automobiles.

Further research is needed to determine whether colour perceptions which are associated with institutions or products reflect cultural preferences or association or whether these colours are associated because the institution or most popular product just happens to be that colour.

- (3) Are there gender, age, or other demographic differences which might cause a specific target market to react differently from the general population? While we were unable to detect any gender differences, our sample was too small to draw conclusions. Likewise, the age categories in our sample showed no significant differences, but all respondents were of a similar age.
- (4) We tested eight specific colours. Do other colours or variations of these colours have different associations? Colour is defined by hue, value, and chrome (Cheskin, 1954). Might small differences in value or chrome be significant?

- (5) The products tested for association were mainly consumer products. These were assumed to be familiar to all the respondents. It would be interesting to explore colour associations with services and industrial products.
- (6) Most of the tested words were positive in connotation. Negative words might be tested as well.

Conclusion

This study has explored the cross-cultural meaning of colours. For many decision makers in the international marketing area there seem to be strong feelings that a universal application across all countries is readily available. The assumption is that a strong product will overcome any problems, such as a poor or negative colour association. This is an unreasoned assumption. At present there are no data or even strong anecdotal information to suggest that cross-cultural differences of colour perception may cause a problem. The analogy, however, seems to be that, when product names and advertising slogans were transferred from one culture into another, problems arose (Ricks, 1983). The suggestion is that, if problems can occur with product names or slogans, it could also possibly happen with colours. Like language, marketers in a particular nation often take colour for granted, having experienced certain colour associations all their lives, and do not even question whether other associations may exist in different societies.

The present study has shown that in some cases global marketing assumptions may be valid, as some colours appear to have universal meaning and associations. However, this study has also demonstrated that this is not always the case. Before a global package is finalised and before a dominant colour is selected for promotional material, the marketer should investigate the meaning and significance of the selected colours in the target markets. International marketers must take notice of these differences if maximum marketing efficiency is to be achieved. They should be flexible enough not to superimpose their culture's values upon another culture.

References

- Cheskin, L. (1954), *Color Guide for Marketing Media*, The Macmillan Company, New York.
- Danger, E.P. (1968), *Using Colour to Sell*, Gower Press, London.
- Hall, E.T. (1959), *The Silent Language*, Doubleday & Company, Inc., New York.
- Levitt, T. (1983), "The Globalization of Markets", *Harvard Business Review*, Vol. 61, May/June, pp. 92-102.
- Levitt, T. (1988), "The Pluralization of Consumption," *Harvard Business Review*, Vol. 66, May/June, pp. 7-8.
- Lüscher, M. (1971), *The Lüscher Color Test*, Translated and edited by Ian Scott, Pocket Books, New York.
- Ricks, D.A. (1983), *Big Business Blunders: Mistakes in Multinational Marketing*, Dow Jones-Irwin, Homewood, IL.

This article has been cited by:

1. Southworth Sarah Song Sarah Song Southworth Ha-Brookshire Jung Jung Ha-Brookshire University of Missouri, Columbia, Missouri, USA . 2016. The impact of cultural authenticity on brand uniqueness and willingness to try. *Asia Pacific Journal of Marketing and Logistics* **28**:4, 724-742. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
2. Mohammed Al-Hamdani, Steven Smith. 2016. Food product design: emerging evidence for food policy. *International Journal of Food Sciences and Nutrition* 1-7. [[CrossRef](#)]
3. Tyge-F. Kummer, Jan Recker, Jan Mendling. 2016. Enhancing understandability of process models through cultural-dependent color adjustments. *Decision Support Systems* **87**, 1-12. [[CrossRef](#)]
4. Muriel Jacquot, Faustine Noel, Carlos Velasco, Charles Spence. 2016. On the Colours of Odours. *Chemosensory Perception* **9**:2, 79-93. [[CrossRef](#)]
5. Judy Park. 2016. A study on colour associations and clothing colour choices in Korea. *International Journal of Fashion Design, Technology and Education* 1-13. [[CrossRef](#)]
6. Chien-Huang Lin, Li-Chin Shih. 2016. Effects of different packages on food product contagion: The moderating roles of mood states and product-related information. *Journal of Consumer Behaviour* **15**:2, 163-174. [[CrossRef](#)]
7. C. Spence Multisensory Packaging Design 1-22. [[CrossRef](#)]
8. Simone Roth, Franz-Rudolf Esch Aufbau und Pflege von Marken durch klassische Kommunikation 1-36. [[CrossRef](#)]
9. Aparna Sundar, James J. Kellaris. 2015. How Logo Colors Influence Shoppers' Judgments of Retailer Ethicality: The Mediating Role of Perceived Eco-Friendliness. *Journal of Business Ethics* . [[CrossRef](#)]
10. Justin Beneke Winchester Business School, University of Winchester, Winchester, UK Ozayr Mathews School of Management Studies, University of Cape Town, Cape Town, South Africa Travys Munthre School of Management Studies, University of Cape Town, Cape Town, South Africa Kavesan Pillay School of Management Studies, University of Cape Town, Cape Town, South Africa . 2015. The role of package colour in influencing purchase intent of bottled water. *Journal of Research in Marketing and Entrepreneurship* **17**:2, 165-192. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
11. George G. Panigyrakis Department of Business Administration, Athens University of Economics and Business, Athens, Greece Antigone G. Kyrousi Department of Business Administration, Athens University of Economics and Business, Athens, Greece . 2015. Color effects in print advertising: a research update (1985-2012). *Corporate Communications: An International Journal* **20**:3, 233-255. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
12. Mahshid Baniani, Sari Yamamoto. 2015. A comparative study on correlation between personal background and interior color preference. *Color Research & Application* **40**:4, 416-424. [[CrossRef](#)]
13. Hailiang Wang, Calvin K.L. Or. 2015. A study of the relationship between color-concept association and occupational background for Chinese. *Displays* **38**, 50-54. [[CrossRef](#)]
14. Jerzy Grobelny, Rafał Michalski. 2015. The role of background color, interletter spacing, and font size on preferences in the digital presentation of a product. *Computers in Human Behavior* **43**, 85-100. [[CrossRef](#)]
15. C. Spence Visual contributions to taste and flavour perception 189-210. [[CrossRef](#)]
16. Xiaolang Wan, Andy T. Woods, Kyoung-Hwan Seoul, Natalie Butcher, Charles Spence. 2015. When the shape of the glass influences the flavour associated with a coloured beverage: Evidence from consumers in three countries. *Food Quality and Preference* **39**, 109-116. [[CrossRef](#)]

17. Carlos Velasco, Xiaolang Wan, Alejandro Salgado-Montejo, Andy Woods, Gonzalo Andrés Oñate, Bingbing Mu, Charles Spence. 2014. The context of colour–flavour associations in crisps packaging: A cross-cultural study comparing Chinese, Colombian, and British consumers. *Food Quality and Preference* **38**, 49–57. [[CrossRef](#)]
18. Calvin K. L. Or, Heller H. L. Wang. 2014. Color-concept associations: A cross-occupational and -cultural study and comparison. *Color Research & Application* **39**:6, 630–635. [[CrossRef](#)]
19. Hannele Kauppinen-Räsänen. 2014. Strategic Use of Colour in Brand Packaging. *Packaging Technology and Science* **27**:8, 663–676. [[CrossRef](#)]
20. Tobias Otterbring, Martin Löfgren, Magnus Lestelius. 2014. Let There be Light! An Initial Exploratory Study of Whether Lighting Influences Consumer Evaluations of Packaged Food Products. *Journal of Sensory Studies* **29**:4, 294–300. [[CrossRef](#)]
21. Charles Spence, Nancy M. Puccinelli, Dhruv Grewal, Anne L. Roggeveen. 2014. Store Atmosphericity: A Multisensory Perspective. *Psychology & Marketing* **31**:7, 472–488. [[CrossRef](#)]
22. Asli D.A. Tasci based at Rosen College of Hospitality Management, University of Florida, Orlando, Florida, USA Basak Denizci Guillet Associate Professor at School of Hotel and Tourism Management, Hong Kong Polytechnic University, Kowloon, Hong Kong William C. Gartner William C. Gartner is based at Department of Applied Economics, University of Minnesota, Saint Paul, Minnesota, USA. . 2014. Judging the book by the cover: consumer preferences of hospitality industry uniforms for destination brands. *Tourism Review* **69**:2, 89–110. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
23. Jessica Ridgway, Beth Myers. 2014. A study on brand personality: consumers' perceptions of colours used in fashion brand logos. *International Journal of Fashion Design, Technology and Education* **7**:1, 50–57. [[CrossRef](#)]
24. Paul Benjamin Lowry, David W. Wilson, William L. Haig. 2014. A Picture is Worth a Thousand Words: Source Credibility Theory Applied to Logo and Website Design for Heightened Credibility and Consumer Trust. *International Journal of Human-Computer Interaction* **30**:1, 63–93. [[CrossRef](#)]
25. Karine Gallopel-Morvan, Patrick Gabriel, Marine Le Gall-Ely, Sophie Rieunier, Bertrand Urien. 2013. Plain packaging and public health: The case of tobacco. *Journal of Business Research* **66**:1, 133–136. [[CrossRef](#)]
26. Betina Piqueras-Fiszman, Charles Spence. 2012. The Influence of the Color of the Cup on Consumers' Perception of a Hot Beverage. *Journal of Sensory Studies* **27**:5, 324–331. [[CrossRef](#)]
27. Hannele Kauppinen-Räsänen Department of Marketing, Hanken School of Economics, Helsinki, Finland Richard A. Owusu School of Business and Economics, Linnaeus University, Kalmar, Sweden Bylon Abeeku Bamfo Department of Marketing & Corporate Strategy, KNUST School of Business, Kumasi, Ghana. 2012. Brand salience of OTC pharmaceuticals through package appearance. *International Journal of Pharmaceutical and Healthcare Marketing* **6**:3, 230–249. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
28. YA-HSIEN KO. 2011. INFLUENCING FACTORS ON COLOR AND PRODUCT-FUNCTION ASSOCIATION 1,2. *Psychological Reports* **108**:3, 861–873. [[CrossRef](#)]
29. Alexander Vuylsteke, Zhong Wen, Bart Baesens, Jonas Poelmans. 2010. Consumers' Search for Information on the Internet: How and Why China Differs from Western Europe. *Journal of Interactive Marketing* **24**:4, 309–331. [[CrossRef](#)]
30. Hannele Kauppinen-Räsänen Hanken School of Economics, Helsinki, Finland Harri T. Luomala University of Vaasa/EPANET, Foodwest Ltd, Seinäjoki, Finland. 2010. Exploring consumers' product-specific colour meanings. *Qualitative Market Research: An International Journal* **13**:3, 287–308. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]

31. Tae-Hee Lee. 2010. Converting color images to grayscale images by reducing dimensions. *Optical Engineering* 49:5, 057006. [[CrossRef](#)]
32. Pia Polsa and Karen M. SpensHannele Kauppinen-RäsänenDepartment of Marketing, Hanken School of Economics, Helsinki, Finland. 2010. The impact of extrinsic and package design attributes on preferences for non-prescription drugs. *Management Research Review* 33:2, 161-173. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
33. Arul Mishra. 2009. Influence of Contagious versus Noncontagious Product Groupings on Consumer Preferences. *Journal of Consumer Research* 36:1, 73-82. [[CrossRef](#)]
34. Kittichai (Tu) WatchravesringkanDepartment of Consumer, Apparel, and Retail Studies, University of North Carolina at Greensboro, Greensboro, North Carolina, USA Ruoh-Nan YanDepartment of Design and Merchandising, Colorado State University, Fort Collins, Colorado, USA Jennifer YurchisinDepartment of Consumer, Apparel, and Retail Studies, University of North Carolina at Greensboro, Greensboro, North Carolina, USA. 2008. Cross-cultural invariance of consumers' price perception measures. *International Journal of Retail & Distribution Management* 36:10, 759-779. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
35. Jean-Charles Chebat, Maureen Morrin. 2007. Colors and cultures: Exploring the effects of mall décor on consumer perceptions. *Journal of Business Research* 60:3, 189-196. [[CrossRef](#)]
36. Mubeen M. Aslam. 2006. Are You Selling the Right Colour? A Cross-cultural Review of Colour as a Marketing Cue. *Journal of Marketing Communications* 12:1, 15-30. [[CrossRef](#)]
37. Marc Hermeking. 2005. Culture and Internet Consumption: Contributions from Cross-Cultural Marketing and Advertising Research. *Journal of Computer-Mediated Communication* 11:1, 192-216. [[CrossRef](#)]
38. Michael CallowMorgan State University, Baltimore, Maryland Leon G. SchiffmanSt John's University, Jamaica, New York, USA. 2004. Sociocultural meanings in visually standardized print ads. *European Journal of Marketing* 38:9/10, 1113-1128. [[Abstract](#)] [[Full Text](#)] [[PDF](#)]
39. Gerald J. Gorn, Amitava Chattopadhyay, Jaideep Sengupta, Shashank Tripathi. 2004. Waiting for the Web: How Screen Color Affects Time Perception. *Journal of Marketing Research* 41:2, 215-225. [[CrossRef](#)]
40. Richard T. Hise, Roberto Solano-Méndez, Larry G. Gresham. 2003. Mexico. *Thunderbird International Business Review* 45:2, 211-224. [[CrossRef](#)]
41. Alan H.S Chan, Alan J Courtney. 2001. Color associations for Hong Kong Chinese. *International Journal of Industrial Ergonomics* 28:3-4, 165-170. [[CrossRef](#)]
42. Leo Yat Ming SinDepartment of Marketing, The Chinese University of Hong KongSuk-ching HoDepartment of Marketing, The Chinese University of Hong Kong. 2001. An assessment of theoretical and methodological development in consumer research on Greater China: 1979-1997. *Asia Pacific Journal of Marketing and Logistics* 13:1, 3-42. [[Abstract](#)] [[PDF](#)]
43. David Ackerman, Gerard Tellis. 2001. Can culture affect prices? A cross-cultural study of shopping and retail prices. *Journal of Retailing* 77:1, 57-82. [[CrossRef](#)]
44. Nader T. Tavassoli. 2001. Color memory and evaluations for alphabetical and logographic brand names. *Journal of Experimental Psychology: Applied* 7:2, 104-111. [[CrossRef](#)]
45. Thomas J. Madden, Kelly Hewett, Martin S. Roth. 2000. Managing Images in Different Cultures: A Cross-National Study of Color Meanings and Preferences. *Journal of International Marketing* 8:4, 90-107. [[CrossRef](#)]
46. Irvine Clarke, Earl D Honeycutt. 2000. Color Usage in International Business-to-Business Print Advertising. *Industrial Marketing Management* 29:3, 255-261. [[CrossRef](#)]

47. Randi Priluck Grossman Seton Hall University, South Orange, New Jersey, USA, and Joseph Z. Wisenblit Seton Hall University, South Orange, New Jersey, USA. 1999. What we know about consumers' color choices. *Journal of Marketing Practice: Applied Marketing Science* 5:3, 78-88. [\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)